5
363.25
J5m
1983
Mar

PLEASE RETU

Montana State Library
3 0864 1006 2392 8

STATE OF MONTANA
DIVISION OF FORENSIC SCIENCE
DEPARTMENT OF JUSTICE
275 West Front Street, Missoula, MT 59802 (406) 728-4970

Ronald L. Rivers, M.D.
State Medical Examiner

Arnold B. Melnikoff
Laboratory Bureau Chief

Dawn M. Kangas
Administrative Assistant

SHELVED WITH PERIODICALS

MARCH 1983

STATE DOCUMENTS COLLECTION

JUN 8 - 1983

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

DEATH INVESTIGATIVE TRAINING

May 2 - 6	St. Louis, Missouri (Coroner's Training Course)
May 9 - 13	Cheyenne, Wyoming (Homicide Investigation School)
May 9 - 20	Modesto, California (Advanced Investigation for Coroners)
June 12 - 17	Summit County, Colorado (International Association of Coroners and Medical Examiners)

AMERICAN ACADEMY OF FORENSIC SCIENCES

Ken Konzak, Jim Hutchison and Ron Rivers participated in workshops on toxicology and computer systems in criminalistics. A three part seminar in DWI and vehicular homicide was attended, as well as many scientific presentations in serology, anthropology, odontology, pathology and toxicology. Ron Rivers presented a paper to the Academy on "Deaths Due to Explosions".

MORE AND MORE EDUCATION

Ken Anderson attended a week-long course for forensic alcohol supervisors.

Arnie Melnikoff and Julie Long participated in a week-long workshop on forensic microscopy.

CONGRATULATIONS

To Larry and Kaya Pederson on the birth of their 6 pound son, Barry Darren on January 29th.

ON CALL SCHEDULE - MONTANA STATE MEDICAL EXAMINER

MARCH 1983

275 W. Front Street
Missoula, Montana 59802

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5 KEN MUELLER
6 KEN MUELLER	7	8	9	10	11	12 JOHN PFAFF
13 JOHN PFAFF	14	15	16	17	18	19 RON RIVERS
20 RON RIVERS	21	22	23	24	25	26 JOHN PFAFF
27 JOHN PFAFF	28	29	30	31		

Telephone Numbers: State Office - 728-4970
WATS Line - 243-5796

Home Phone: Dr. Ron Rivers- 728-2033 (Home)
(week nights call unless otherwise indicated)

Dr. John Pfaff - Great Falls
Hospital - 727-3333
Home - 727-3905

Dr. Ken Mueller- Billings
Hospital - 657-7000
Home - 248-3024

DRUNK DRIVING
MARCH 1983
R. L. Rivers, M.D.

As the vehicle slams into the bridge abutment at 55 M.H.P. the driver's legs break at the knees, the steering wheel crushes the heart and lungs, and the head smashes into the dashboard as the broken windshield glass tears at the face. All this occurs in seven tenths of a second.

The passenger has ripped through the windshield at 55 M.P.H. and has hit the concrete wall with 3200 pounds of force. The skull disintegrated.

Two six packs of beer were found in the car with four cans empty. The bartender at the Blue Moon Saloon explained, "They had one beer apiece, then bought the six packs for the road. They said it was a one hour or one six pack trip to their cabin. They seemed real sober to me just a half hour ago."

However, the analysis of both victim's body fluids revealed some interesting results.

	Driver	Passenger
Blood	.65 % alcohol	.09% alcohol
Vitreous	.17 % alcohol	unobtainable
Urine	.20 % alcohol	unobtainable

QUESTIONS:

1. Can a person be conscious and driving at 0.65%?

2. Why was the driver's blood alcohol so much higher than the vitreous and urine?

3. Can we assume that the driver was drinking twice as much as the passenger?

4. Are the alcohol levels consistent with the bartender's estimate of sobriety?

DRUNK DRIVING
MARCH 1983
R. L. Rivers, M.D.

ANSWERS:

1) Absolutely! The highest reported level in a living individual that I know of is a 1.1 gm% alcohol. The average individual is in a coma at .4 gm% and dead at .5 gm%.

2) The blood was contaminated by gastric contents. Unfortunately most vehicular fatalities are not autopsied in Montana so blood is taken blindly from the chest. If the chest has been crushed there is a likelihood that the stomach has also been ruptured, then unabsorbed alcohol in the stomach mixes with the blood from the chest.

   Blood should be taken from the leg veins to avoid this possibility and eye fluid or vitreous taken to confirm a correct alcohol level.

3) No, for several reasons. . . . .

   a) The passenger may be twice as big as the driver so it takes more alcohol.

   b) The driver was guzzling while the passenger was sipping so the driver reached a peak quicker.

   c) The passenger may have eaten a meal which would delay absorption.

   d) Other factors, such as stomach surgery, may delay absorption.

4) No. Almost every witness underestimates the volume of drinking. But there is no substitute for the scientific accuracy of laboratory analysis.

   Assuming average size adults in average situations, the driver would had to have approximately ten 12 oz. beers and the passenger five 12 oz. beers. These approximations are speculative retrograde extrapolations and subject to many errors. Only a forensic expert familiar with the variables should testify in this regard.

   All bartenders will not admit they have served a drunk. Some have been sued by third parties injured by the drunk under "dram-shop" laws.

MARCH 1983
R. L. Rivers, M.D.

NOTE: Last Months Sexual Assault Case -

Dr. Frank Morgan, a forensic dentist, commented that "one should also look for any bitemarks on the deceased that could incriminate more than one person". I appreciated this comment as bitemark identification is now a very important part of forensic science.

Dr. Morgan in Spokane and Dr. Dave Johnson in Great Falls are both available for dental identification of human remains. Their phone numbers are:

Dr. Morgan
Office - (509) 926-6238
Home - (509) 928-6410

Dr. Johnson
Office - (406) 761-1091
Home - (406) 453-8198